

The Public's Health

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Health Surveys — Turning Numbers into Public Health Practice

Every day we read and hear statistics on health topics — how many people in Rhode Island are overweight (52 percent), how many are eating at least 5 fruits or vegetables daily (21 percent), how many are smoking regularly (23 percent), or how many high school students are physically active (66 percent).

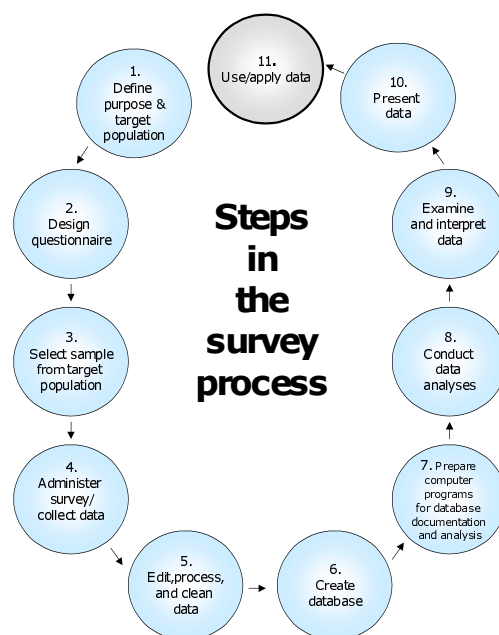
Ever wonder where these statistics come from?

Did someone sneak into gym classes? Is someone watching us light up? Checking our attendance at the gym? Looking too closely into our grocery carts? The answer is “no”. These data are collected from people who volunteer to respond to surveys about their health and health related behaviors.

The Rhode Island Department of Health (HEALTH) Office of Health Statistics conducts four major health surveys. Three are part of national survey systems which collect state-specific as well as national data (**the Behavioral Risk Factor Survey, the Youth Risk Behavior Survey, the Youth Tobacco Survey**); one is specific only to Rhode Island (**the Rhode Island Health Interview Survey**). This issue of “The Public’s Health” takes a closer look at each of these surveys.

Why do we conduct health surveys? Health surveys provide data not available from event-based sources such as birth and death records, or hospital discharge records. Event-based data provide information only about the populations that interact with some part of the health care system. Many health related activities and conditions, especially ones important for disease prevention and health promotion, never show up in event-based data systems. Some

important examples include: life-style behaviors that increase risk or protect people from disease, such as exercise; attributes that affect the likelihood of receiving medical services, such as having health insurance coverage; or disease symptoms,



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such as joint pain or shortness of breath. The only way to get these types of data is to ask people directly through surveys.

Health surveys are conducted with respondents who have been selected through scientific random sampling from a target population. When properly conducted, results from those sampled can accurately reflect the entire population. Sample surveying is a time and cost-effective way to get important information about a much larger population.

How does HEALTH use survey data? Primary analysis is the first step — it provides a picture of the population’s health and health behaviors. Results of

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primary analyses then have a wide variety of applications. (See Table below)

can address emerging health issues and state-specific needs; and it allows state-to-state and state-to-nation comparisons.

Primary analysis is used to:	For example:
Determine prevalence of health risks	<i>23 percent of Rhode Islanders are current smokers.</i>
Identify demographic differences in prevalence rates	<i>Low income Rhode Islanders are 3 times less likely to have health insurance coverage as higher income persons.</i>
Identify populations at highest risk for negative health outcomes	<i>Rhode Islanders with disabilities are more likely to report poor mental health than non-disabled persons.</i>
Monitor/track trends in health-related behaviors over time	<i>Obesity has increased from 10% of Rhode Island adults in 1991 to 17% percent in 2000.</i>
Examine relationships between variables	<i>There is a strong correlation between adolescent tobacco use and the use of alcohol and other substances</i>
Applications for survey data:	For example:
Determine priority health issues	<i>Minorities have higher rates for many measures of health risks. Make elimination of disparities a priority.</i>
Monitor progress toward achieving prevention objectives and goals	<i>Monitor progress toward achieving national and Rhode Island Healthy People 2000/2010 objectives and goals.</i>
Educate the public, the health community, and policymakers	<i>Communicate data on health topics through publications, reports, news releases, presentations, and websites.</i>
Target health intervention programs	<i>Tobacco initiation increases substantially during the middle school years. Tobacco prevention efforts need to focus on middle school students.</i>
Evaluate the effectiveness of health intervention programs	<i>Increasing flu immunization rates reflect the success of adult flu immunization programs.</i>
Guide the allocation of resources	<i>Assure universal healthcare coverage for children.</i>
Support health policy initiatives and legislation designed to promote health and access to health care	<i>RIte Care/RIte Share Initiatives are supported with data from the BRFSS</i>
Identify emergent health issues	<i>Data indicate a rapid increase in obesity rates -- an obesity "epidemic".</i>

Standard procedures, specified by CDC, are used to select respondents, administer the survey, and process data. A standard “core” questionnaire is also used. Because the same “core” questions are asked each year or every other year, nationwide and state trends can be monitored over time. States can also add questions on issues of special interest to the state.

“Core” topics on the BRFSS include: tobacco use, physical activity, health insurance coverage, alcohol use, seat belt use, diet, preventive services (e.g. cancer, hypertension and cholesterol screening; and immunizations), high risk behaviors for HIV/AIDS, and overweight/obesity. Standard demographic information is also collected e.g. age, gender, income, employment and marital status, education, race/ethnicity.

To support state policies and programs RI has added questions to the BRFSS in different years on topics such as intimate partner violence, environmental tobacco smoke, birth control, disabilities, asthma, diabetes, and oral health.

Rhode Island has participated in the BRFSS each year since 1984. A professional survey research firm administers the BRFSS throughout the year to a random sample of Rhode Islanders using computer-assisted telephone interviewing technology. Participation is voluntary and anonymous; interviews are conducted in English, Spanish, and Portuguese. CDC edits and processes data to create an annual dataset, which is provided to the state. In 2001, about 344 Rhode Islanders were interviewed each month, totaling 4,120 interviews for the year.

HEALTH publicizes BRFSS results through reports, fact sheets, press releases, publications, and on the HEALTH website. These data support many of HEALTH’s programs (e.g. Obesity Control, Women’s Cancer Screening, Asthma Control) and help monitor progress towards achievement of the state’s Healthy Rhode Islanders 2010 health objectives. Other state agencies (DHS), private health-related organizations (e.g. RI Lung Association, RI Arthritis Foundation, Urban League), and academic institutions use BRFSS data for research, program design, and policy development.

For more information on the Rhode Island BRFSS,

The Behavioral Risk Factor Surveillance System



The Behavioral Risk Factor Surveillance System (BRFSS) is the largest continuously conducted telephone health survey in the world and the leading source of state-based information on adult health-risk behaviors. The BRFSS, sponsored by CDC in all 50 states, Washington DC and 3 US territories, is an annual, ongoing survey used to monitor health-risk behaviors, preventive health practices, health insurance coverage, and access to health care among adults ages 18 and older. It provides flexible, timely, and ongoing data collection; it

Using the BRFSS to meet state needs.

Many Americans experienced unspeakable tragedy on September 11, 2001. The RI Department of Health (HEALTH) and the RI Department of Mental Health, Retardation, and Hospitals (MHRH) collaborated to use the BRFSS as a way to assess the mental health status of Rhode Islanders in response to this event. As a result, questions already present on the 2001 BRFSS addressing mental health status are being continued in 2002. They will be used to assess the mental health status of people before and after September 11th. In addition, new questions were developed and added to the 2002 BRFSS to determine how many Rhode Islanders suffer from depression and how many of those people with depression seek treatment. These questions are being supported by MHRH with federal funds appropriated for this purpose shortly after the events of September 11th.

contact Jana E. Hesser, PhD or Colleen M. Ryan, MPH at 401-222-2550 or visit the HEALTH website <http://www.healthri.org/>.

For more information on the national or RI BRFSS, visit <http://www.cdc.gov/nccdphp/brfss>.



The Rhode Island Youth Risk Behavior Survey and the Youth Tobacco Survey

The **Youth Risk Behavior Survey (YRBS)** and the **Youth Tobacco Survey (YTS)** monitor health-risk behaviors that contribute to the major causes of death, disease, injury, and social problems among adolescents in Rhode Island. Both surveys gather information on tobacco use, the YTS in great detail. The YRBS also collects data on dietary practices, physical activity, alcohol and other drug use, activities related to violence or unintentional injuries, and sexual behaviors that may result in HIV infection, STDs, or unintended pregnancies. The information from the two surveys supports the development, implementation, and evaluation of prevention and control programs.

The YRBS determines the percentage of public school students in grades 9-12 exhibiting health-risk behaviors, assesses behavioral changes over time, explores combinations of behaviors, compares Rhode Island to national data, and measures progress toward *Healthy Rhode Islanders 2010* objectives. The YTS focuses in greater detail on tobacco issues among public school students in grades 6-12. The YTS collects data on the use of different tobacco products (e.g. cigarettes, smokeless tobacco, cigars and pipes), on exposure to tobacco smoke, and on knowledge, and attitudes

about tobacco products and use.

Many key parties help design, administer and use the results of the youth surveys. The Rhode Island YRBS and YTS are part of a nationwide system sponsored by the Centers for Disease Control and Prevention (CDC). CDC develops standard questions for both surveys, provides funding for conducting the YRBS, and offers various forms of technical assistance. In addition to HEALTH and the RI Department of Education, primary users of Rhode Island's data include governmental agencies, community substance abuse task forces, voluntary health organizations (e.g., RI Heart Association, RI Lung Association, American Cancer Society), educators (teachers, school nurses, student assistance counselors, principals, and superintendents), and political decision makers (state legislators, mayors, town councils, and school committees).

Rhode Island administers the YTS in middle schools and the YTS and YRBS in high schools. To determine who answers the surveys, CDC and the Office of Health Statistics generate random samples of middle schools and high schools as well as random samples of classrooms within the schools. Students in the selected classrooms complete the questionnaire on their own during one class period. In 2001 about 1,400 students completed the YRBS, and about 1,700 completed the YTS.

For the YRBS, data representing all RI public school students in grades 9-12 are available for 1997 and 2001. (For YRBS results see www.healthri.org/chic/statistics/stat_rep.htm). For the YTS, data representing all public school students in grades 6-8 and grades 9-12 are available for 2001. HEALTH plans to administer both surveys again in the spring of 2003 and every other year thereafter.

For further information on Rhode Island's YRBS or YTS, contact Donald Perry at (401) 222-7628 or DonP@doh.state.ri.us. For more information on the national YRBS, visit <http://www.cdc.gov/nccdphp/dash/yrebs>.

Use of School Based Survey Data: A Real Life Example

The 1997 Youth Risk Behavior Survey (YRBS) indicated that 35% of Rhode Island students in grades 9-12 were current cigarette smokers. In the years between 1997 and 2001, government, educational institutions, and youth related organizations on the state and local level launched many programs aimed at tobacco prevention and control among children. The "Rip It Out" Campaign was one such initiative. Youth across Rhode Island tore out thousands of tobacco advertisements from magazines and other publications and brought them to the State House for a huge rally in April 2001. The results of the 2001 YRBS demonstrate the impact of these youth tobacco control efforts. The rate for cigarette smoking in grades 9-12 in 2001 was about 25%, or 1 in 4 students, compared with 35% or 1 in 3 students in 1997.

Rhode Island Health Interview Survey (RIHIS)



The **Rhode Island Health Interview Survey (RIHIS)**, modeled on the National Health Interview Survey, is a telephone survey that collects health related information on children and adults in sampled Rhode Island households. The first RIHIS occurred in 1972; the most recent was completed in 2001.

Survey Year	RIHIS Sample Size	
	Households	Individuals
1972	3,086	9,383
1975	1,952	5,655
1980	2,097	5,728
1985	2,290	5,907
1990	2,588	6,536
1996	2,580	6,583
2001	About 2,500	About 6,500

The RIHIS is one of HEALTH's most important sources of population based data on children and adolescents. RIHIS data on adolescents complements data collected through the YRBS and YTS; RIHIS data on adults complements data collected through the BRFSS. Because RIHIS data are collected by family and household, the survey also offers the unique opportunity to examine the characteristics of individuals in relation to those of other family and household members.

The RIHIS collects information about health status, risk behaviors (seat belt use, helmet use, tobacco use), preventive practices (preventive health checkups and dentist visits), health insurance coverage, use of health care services, selected health conditions (asthma, disability), housing conditions (lead, moisture, environmental tobacco smoke), and demographic characteristics for each member of a contacted household. Each time HEALTH administers the RIHIS, a

basic set of topics are retained on the questionnaire to track trends over time. However, special topics may be added to meet specific program data needs. For example, the 2001 questionnaire added questions on prescription drug coverage.

A professional survey research firm administers the RIHIS to a random sample of Rhode Island households using computer-assisted telephone interviewing technology. Interviewers question the adult in the household who knows the most about the health and health care of all household members. Voluntary and anonymous interviews take place in both English and Spanish over a period of 3 - 4 months. HEALTH publicizes results of the HIS through reports, fact sheets, and press releases, and through the HEALTH website (http://www.healthri.org/chic/statistics/stat_rep.htm). HEALTH programs, academic institutions, and health related organizations use these data for research, program and policy development. The next RIHIS is scheduled for 2003.

Using the HIS

- HEALTH's Oral Health Program has used data on oral health topics in two grant applications; in presentations to internal and external health professional groups; and for the Special Senate Commission to Study and Make Recommendations on Ways to Maintain and Expand Access to Quality Oral Health Care for All Rhode Island Residents.
- Brown University's Population Studies & Training Center conducted an extensive analysis of 1996 HIS data on disabilities for the adult population. A comprehensive report, *Functional Limitation Among Rhode Island Adults, 1996*, was published and provided to the Governor's Office, all state legislators, and all State Agency Directors.

For further information contact Jana E. Hesser, PhD at (401) 222-5111 or at JanaH@doh.state.ri.us.

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in Safe and Healthy Communities*

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